District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
Revised April 3, 2017

**For temporary pits, below-grade tanks, and multi-well fluid management pits**, submit to the appropriate NMOCD District Office.
**For permanent pits** submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

# Pit, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

Type of action:
- ☐ Below grade tank registration
- ☐ Permit of a pit or proposed alternative method
- ☒ Closure of a pit, below-grade tank, or proposed alternative method
- ☐ Modification to an existing permit/or registration
- ☐ Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank, or proposed alternative method

***Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request***

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.
Operator: Four Corners Exploration c/o Dugan Production Corp. OGRID #: 008090
Address: 709 E. Murray Drive, Farmington, NM 87401
Facility or well name: South Bisti Federal 29 #1
API Number: 30-045-26730 OCD Permit Number:
U/L or Qtr/Qtr A Section 29 Township 25N Range 12W County: San Juan
Center of Proposed Design: Latitude 36.378756 Longitude -108.126986 NAD83
Surface Owner: ☒ Federal ☐ State ☐ Private ☒ Tribal Trust or Indian Allotment

2.
☐ **Pit:** Subsection F, G or J of 19.15.17.11 NMAC
Temporary: ☐ Drilling ☐ Workover
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management Low Chloride Drilling Fluid ☐ yes ☐ no
☐ Lined ☐ Unlined Liner type: Thickness _____mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
☐ String-Reinforced
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____ Volume: _____bbl Dimensions: L_____ x W_____ x D_____

3.
☒ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC
Volume: 60 bbl Type of fluid: Produced Water
Tank Construction material: Steel
☐ Secondary containment with leak detection ☒ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other _____
Liner type: Thickness 30 mil ☐ HDPE ☒ PVC ☐ Other _____

4.
☐ **Alternative Method:**
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

5.
**Fencing:** Subsection D of 19.15.17.11 NMAC *(Applies to permanent pits, temporary pits, and below-grade tanks)*
☐ Chain link, six feet in height, two strands of barbed wire at top *(Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)*
☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet
☒ Alternate. Please specify Field Fence (See Design and Construction Plan)

6.

**Netting:** Subsection E of 19.15.17.11 NMAC *(Applies to permanent pits and permanent open top tanks)*

☒ Screen ☐ Netting ☐ Other _____

☐ Monthly inspections (If netting or screening is not physically feasible)

7.

**Signs:** Subsection C of 19.15.17.11 NMAC

☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☒ Signed in compliance with 19.15.16.8 NMAC

8.

**Variances and Exceptions:**

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

***Please check a box if one or more of the following is requested, if not leave blank:***

☐ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

9.

**Siting Criteria (regarding permitting):** 19.15.17.10 NMAC

***Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below.*** **Siting criteria does not apply to drying pads or above-grade tanks.**

| | |
|---|---|
| **General siting** | |
| **Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.**<br>- ☒ NM Office of the State Engineer - iWATERS database search; ☒ USGS; ☐ Data obtained from nearby wells | ☐ Yes ☐ No ☐ NA |
| **Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit .**<br>NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | ☐ Yes ☐ No ☐ NA |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. **(Does not apply to below grade tanks)**<br>- Written confirmation or verification from the municipality; Written approval obtained from the municipality | ☐ Yes ☐ No |
| Within the area overlying a subsurface mine. **(Does not apply to below grade tanks)**<br>- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division | ☐ Yes ☐ No |
| Within an unstable area. **(Does not apply to below grade tanks)**<br>- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map | ☐ Yes ☐ No |
| Within a 100-year floodplain. **(Does not apply to below grade tanks)**<br>- FEMA map | ☐ Yes ☐ No |
| **Below Grade Tanks** | |
| Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark).<br>- Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☒ No |
| Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;.<br>- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site | ☐ Yes ☒ No |
| **Temporary Pit using Low Chloride Drilling Fluid** (maximum chloride content 15,000 mg/liter) | |
| Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.)<br>- Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application.<br>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | ☐ Yes ☐ No |
| Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application.<br>NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |

| | |
|---|---|
| Within 100 feet of a wetland.<br>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| **Temporary Pit Non-low chloride drilling fluid** | |
| Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).<br>- Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.<br>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | ☐ Yes ☐ No |
| Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;<br>- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within 300 feet of a wetland.<br>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| **Permanent Pit or Multi-Well Fluid Management Pit** | |
| Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).<br>- Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.<br>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | ☐ Yes ☐ No |
| Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.<br>- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within 500 feet of a wetland.<br>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |

10.

**Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC

***Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.***

☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

11.

**Multi-Well Fluid Management Pit Checklist:** Subsection B of 19.15.17.9 NMAC

***Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.***

☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☐ A List of wells with approved application for permit to drill associated with the pit.
☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
☐ Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

12.
**Permanent Pits Permit Application Checklist:** Subsection B of 19.15.17.9 NMAC
***Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.***

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including $H_2S$, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

13.
**Proposed Closure:** 19.15.17.13 NMAC
***Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.***

Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Multi-well Fluid Management Pit ☐ Alternative

Proposed Closure Method:
- ☐ Waste Excavation and Removal
- ☐ Waste Removal (Closed-loop systems only)
- ☐ On-site Closure Method (Only for temporary pits and closed-loop systems)
  - ☐ In-place Burial ☐ On-site Trench Burial
- ☐ Alternative Closure Method

14.
**Waste Excavation and Removal Closure Plan Checklist:** (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC
- ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- ☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

15.
**Siting Criteria (regarding on-site closure methods only):** 19.15.17.10 NMAC
***Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance.***

| | |
|---|---|
| Ground water is less than 25 feet below the bottom of the buried waste.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | ☐ Yes ☐ No ☐ NA |
| Ground water is between 25-50 feet below the bottom of the buried waste<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | ☐ Yes ☐ No ☐ NA |
| Ground water is more than 100 feet below the bottom of the buried waste.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | ☐ Yes ☐ No ☐ NA |
| Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).<br>- Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.<br>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | ☐ Yes ☐ No |
| Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application.<br>- NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Written confirmation or verification from the municipality; Written approval obtained from the municipality | ☐ Yes ☐ No |
| Within 300 feet of a wetland.<br>US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance | |

| | |
|---|---|
| adopted pursuant to NMSA 1978, Section 3-27-3, as amended.<br>- Written confirmation or verification from the municipality; Written approval obtained from the municipality | ☐ Yes ☐ No |
| Within the area overlying a subsurface mine.<br>- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division | ☐ Yes ☐ No |
| Within an unstable area.<br>- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map | ☐ Yes ☐ No |
| Within a 100-year floodplain.<br>- FEMA map | ☐ Yes ☐ No |

16.

**On-Site Closure Plan Checklist:** (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC
- ☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17.11 NMAC
- ☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
- ☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

17.

**Operator Application Certification:**

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

18.

**OCD Approval:** ☐ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment)

**OCD Representative Signature:** _____ **Approval Date:** _____

**Title:** _____ **OCD Permit Number:** _____

19.

**Closure Report (required within 60 days of closure completion):** 19.15.17.13 NMAC

***Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.***

☐ **Closure Completion Date:** April 18, 2019

20.

**Closure Method:**

☒ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)

☐ If different from approved plan, please explain.

21.

**Closure Report Attachment Checklist:** ***Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.***

- ☒ Proof of Closure Notice (surface owner and division)
- ☐ Proof of Deed Notice (required for on-site closure for private land only)
- ☐ Plot Plan (for on-site closures and temporary pits)
- ☒ Confirmation Sampling Analytical Results (if applicable)
- ☐ Waste Material Sampling Analytical Results (required for on-site closure)
- ☒ Disposal Facility Name and Permit Number
- ☒ Soil Backfilling and Cover Installation
- ☒ Re-vegetation Application Rates and Seeding Technique
- ☒ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude _____ Longitude _____ NAD: ☐ 1927 ☐ 1983

22.

**Operator Closure Certification:**

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): Kevin Smaka Title: Agent

Signature: Date: September 2, 2020

e-mail address: kevin.smaka@duganproduction.com Telephone: 505-325-1821

## Kevin Smaka

**From:** Kevin Smaka <Kevin.Smaka@duganproduction.com>
**Sent:** Monday, March 25, 2019 7:27 AM
**To:** Cory.Smith@state.nm.us; Vanessa.Fields@state.nm.us; Mike Sandoval
**Subject:** Sampling schedule

Hi Cory,

Dugan Production will sample this Wednesday for the Arviso and the South Bisti federal 29 #1. We will start at 10 @the south bisti and plan to do the Arviso at noon.

Kevin

Sent from my iPhone

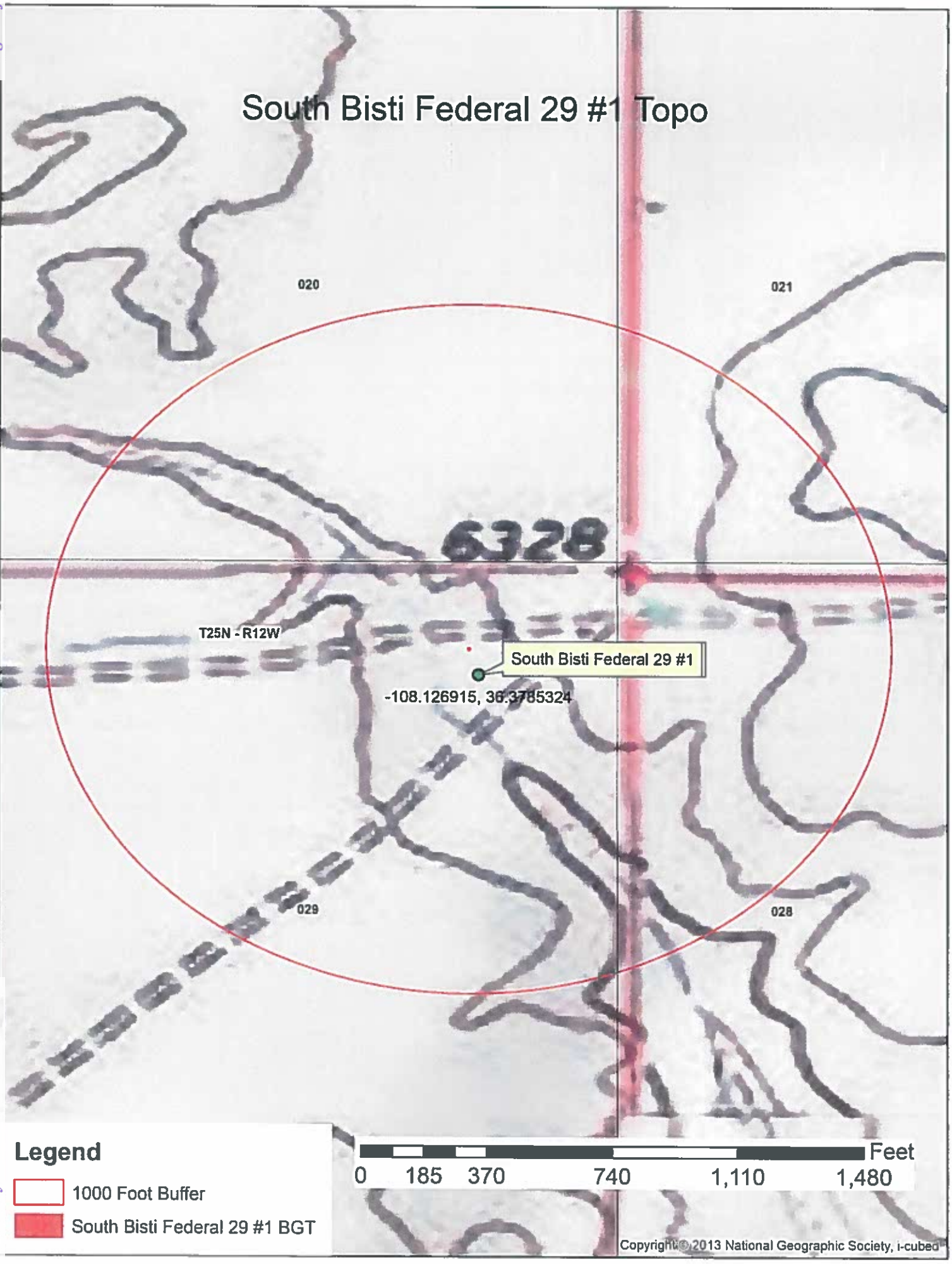
## Kevin Smaka

**From:** Kevin Smaka
**Sent:** Monday, March 25, 2019 3:06 PM
**To:** Smith, Cory, EMNRD; Fields, Vanessa, EMNRD
**Cc:** Mike Sandoval; Curtis Davis; Creeden, Eric; Thomas, Leigh
**Subject:** Sampling Schedule

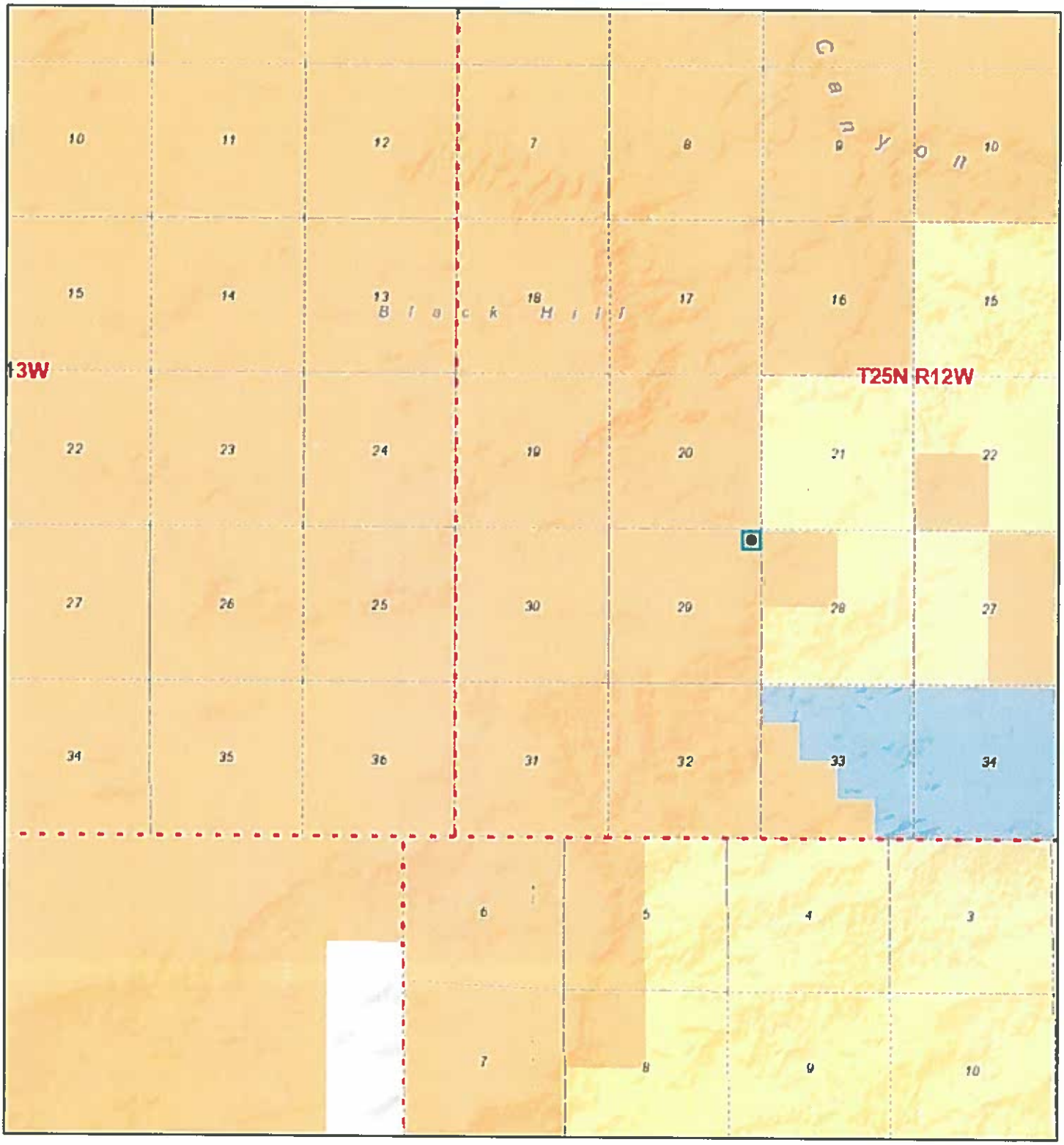
Everyone,

We planned on doing our sampling Wednesday but we have a scheduling conflict. We will sample Thursday at 10 at the south Bisti and move to the Arviso at 12.

Kevin Smaka
Regulatory Engineer
Dugan Production Corp.
505-486-6207



# Active Mines in New Mexico




8/11/2020, 4:17:45 PM

1:72,224

0 0.5 1 2 mi

0 0.75 1.5 3 km

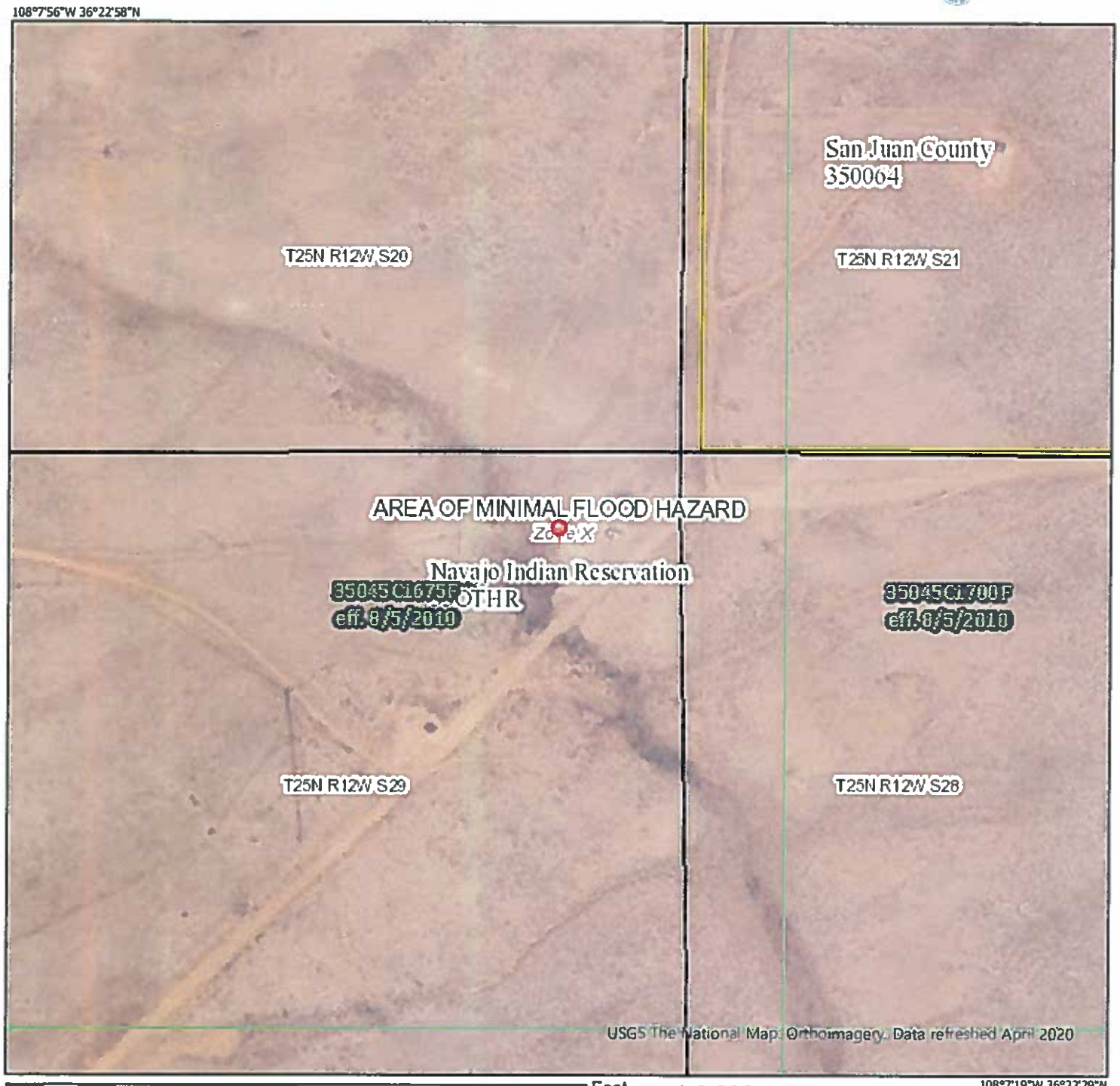
U.S. Bureau of Land Management - New Mexico State Office, Sources: Esri, USGS, NOAA, Sources: Esri, Garmin, USGS, NPS

EMNRD MMD GIS Coordinator

NM Energy, Minerals and Natural Resources Department (http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=1b5e577974664d689b47790897ca2795)

# National Flood Hazard Layer FIRMette

FEMA




0 250 500 1,000 1,500 2,000 Feet

1:6,000

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

**SPECIAL FLOOD HAZARD AREAS**
- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway

**OTHER AREAS OF FLOOD HAZARD**
- 0.2% Annual Chance Flood Hazard, Are of 1% annual chance flood with averag depth less than one foot or with drainag areas of less than one square mile Zone
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee. See Notes. Zone X
- Area with Flood Risk due to Levee Zone D

**OTHER AREAS**
- NO SCREEN Area of Minimal Flood Hazard Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard Zon

**GENERAL STRUCTURES**
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

**OTHER FEATURES**
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

**MAP PANELS**
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximat point selected by the user and does not represe an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/11/2020 at 6:12 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

# New Mexico Office of the State Engineer
# Water Column/Average Depth to Water

No records found.

**PLSS Search:**

**Section(s):** 29 **Township:** 25N **Range:** 12W

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

| | |
|---|---|
| Incident ID | |
| District RP | |
| Facility ID | |
| Application ID | |

# Release Notification

## Responsible Party

| | |
|---|---|
| Responsible Party Four Corners Exploration | OGRID 008090 |
| Contact Name Kevin Smaka, Agent | Contact Telephone 505-325-1821 x1049 |
| Contact email kevin.smaka@duganproduction.com | Incident # *(assigned by OCD)* NVF1820036683 |
| Contact mailing address c/o Dugan Production Corp.<br>PO Box 420, Farmington, NM 87499-0420 | |

## Location of Release Source

Latitude 36.378546 Longitude -108.126871
*(NAD 83 in decimal degrees to 5 decimal places)*

| | |
|---|---|
| Site Name South Bisti Federal 29 #1 | Site Type |
| Date Release Discovered | API# *(if applicable)* 30-045-26730 |

| Unit Letter | Section | Township | Range | County |
|---|---|---|---|---|
| A | 29 | 25N | 12W | San Juan |

NMOCD
APR 05 2019
DISTRICT III

Surface Owner: ☐ State ☐ Federal ☒ Tribal ☐ Private (*Name:* _____)

## Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

| | | |
|---|---|---|
| ☐ Crude Oil | Volume Released (bbls) | Volume Recovered (bbls) |
| ☐ Produced Water | Volume Released (bbls) | Volume Recovered (bbls) |
| | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | ☐ Yes ☐ No |
| ☐ Condensate | Volume Released (bbls) | Volume Recovered (bbls) |
| ☐ Natural Gas | Volume Released (Mcf) | Volume Recovered (Mcf) |
| ☐ Other (describe) | Volume/Weight Released (provide units) | Volume/Weight Recovered (provide units) |

Cause of Release

31

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | |
| District RP | |
| Facility ID | |
| Application ID | |

# Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

**Closure Report Attachment Checklist:** ***Each of the following items must be included in the closure report.***

- [x] A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- [x] Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- [x] Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- [x] Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Kevin Smaka Title: ~~Regulatory Engineer~~ Agent

Signature: Kevin Smaka Date: 4-4-2019

email: kevin.smaka@duganproduction.com Telephone: 505-325-1821

**OCD Only**

Received by: OCD Date: 4/5/19

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Cory Date: 4/9/19

Printed Name: Cory Title: Environmental Spec.

# South Bisti Federal 29 #1

## BGT Closure Report

Dugan closed the BGT located at the South Bisti Federal 29 #1. A report detailing remedial activities associated with the closure of the BGT and its associated release is included with this BGT closure packet.

In addition to the steps taken to remediate the spill Dugan took the following actions.

1. The BGT vault was filled with similar soils found nearby on location.
2. An above grade tank was installed.
3. Seeding and other reclamation activities were considered but since the water storage tank area is still part of an active well site it would have been wasteful to proceed with remedial activities.
4. Dugan will take all necessary steps to ensure that the site is correctly reclaimed by seeding and ensuring adequate regrowth when the well is plugged and abandoned.

Please note Dugan is not the operator of record. Dugan provides contract pumping services to Four Corners Exploration and handles all correspondence and regulatory matters on their behalf.

# South Bisti Federal 29 #1

30-045-26730

BGT Release Closure Report

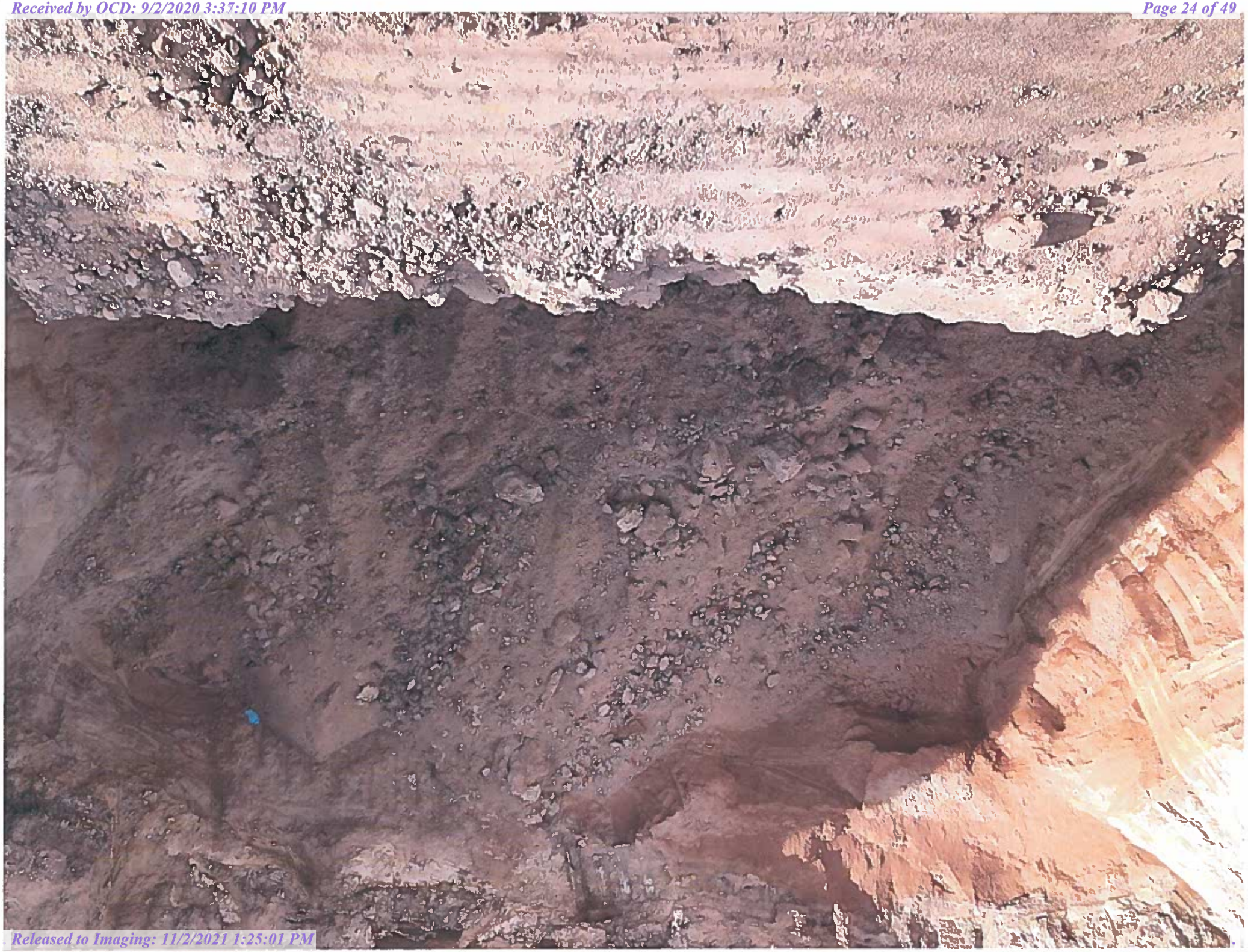
The South Bisti Federal 29 #1 is owned and operated by Four Corners exploration. Dugan Production Corp. provides pumping services for the well. The well was inspecpted by the NM OCD and they noted the BGT was buried by fill and sand. On 7-18-2018 Dugan, OCD inspectors and a contract crew witnessed the excavation of the side walls and bottom. As the bottom was reached there was an unplanned release in the pit. The release was caused by corrosion inside the BGT. A C-141 was filed and Dugan began coordinating with the well owner to determine the best course of action. The owner elected to remediate the spill via excavation and removal.

Weather delays and scheduling issues delayed the completion of remedial activities at the spill site. Beginning on March 18th, 2019 remediation and delineation activities began. First, test holes were dug 15 feet from the pit vault side walls in three of the 4 cardinal directions. The holes were dug to a depth of 15 feet and no contamination was detected. The east wall was left alone because a separator was resting above that wall and the operator desired the equipment be left in place if possible. Samples taken from that wall did not contain signs of contamination so we elected to not remove the equipment since that wall appeared to be clean.

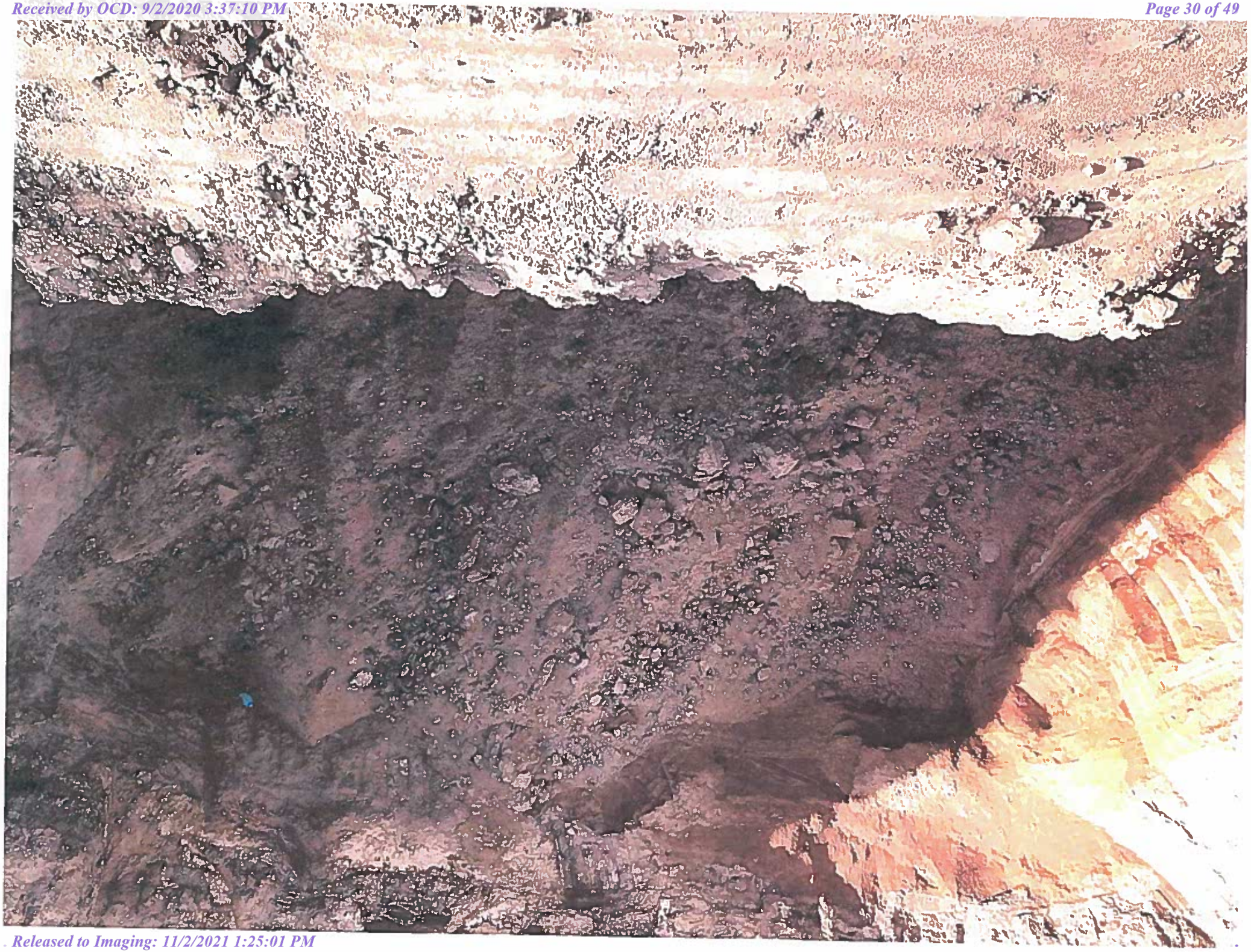
The initial hole's size was roughly 20'x20'x10'. After removing all contaminated soils the hole grew to be 26'x31'x20'. Once Dugan was satisfied with the work that had been done the NMOCD and BLM were notified that samples would be taken, on March 28th, in the event the agency would like to witness the sampling. The samples came back within the allowable limits of the "spill rule" and the hole was back filled.

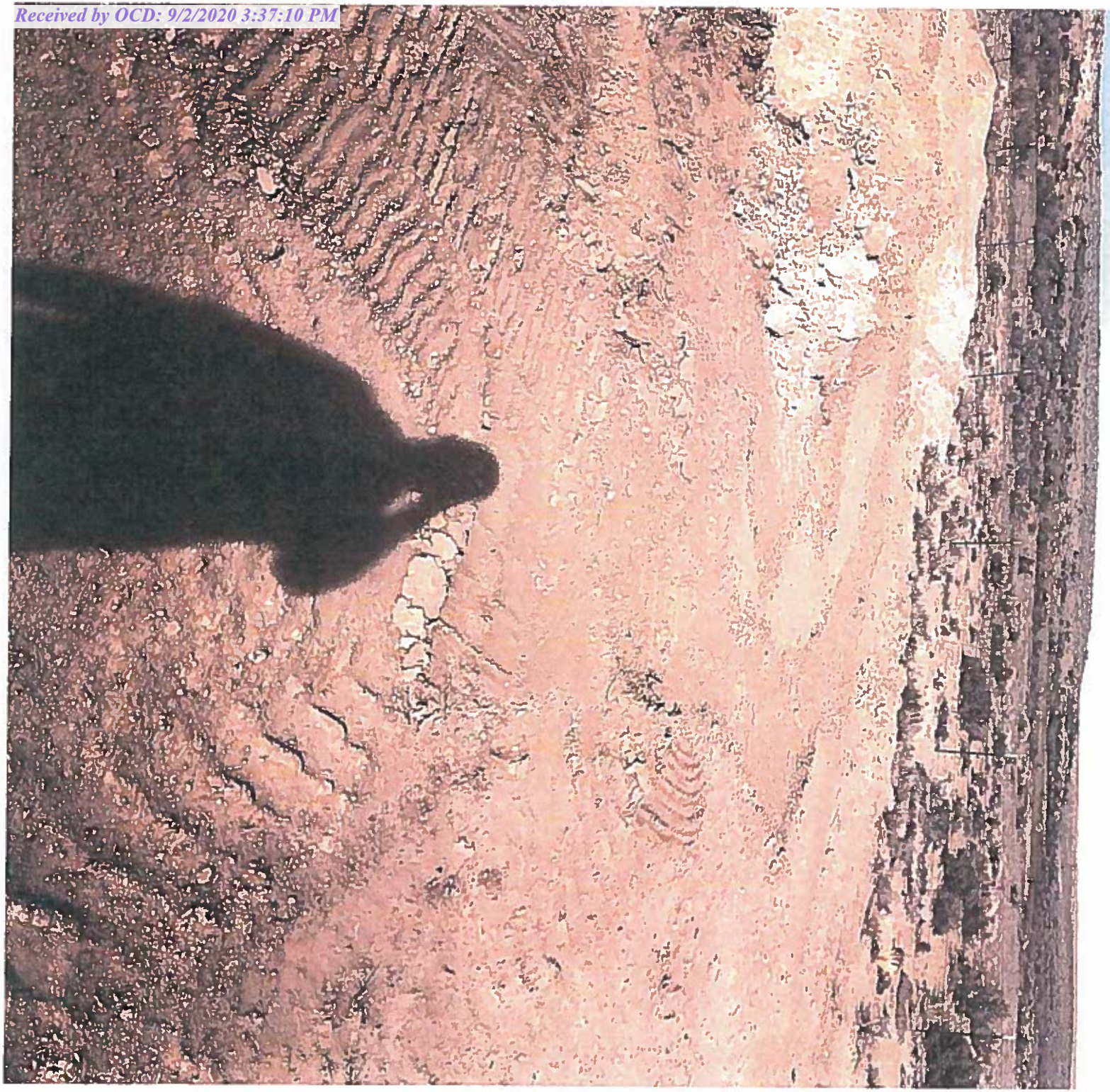
Included with this closure report are the following attachments.

1. A scaled site map
2. Sampling results
3. Sampling Diagram
4. Photographs of the BGT pit prior to back filling

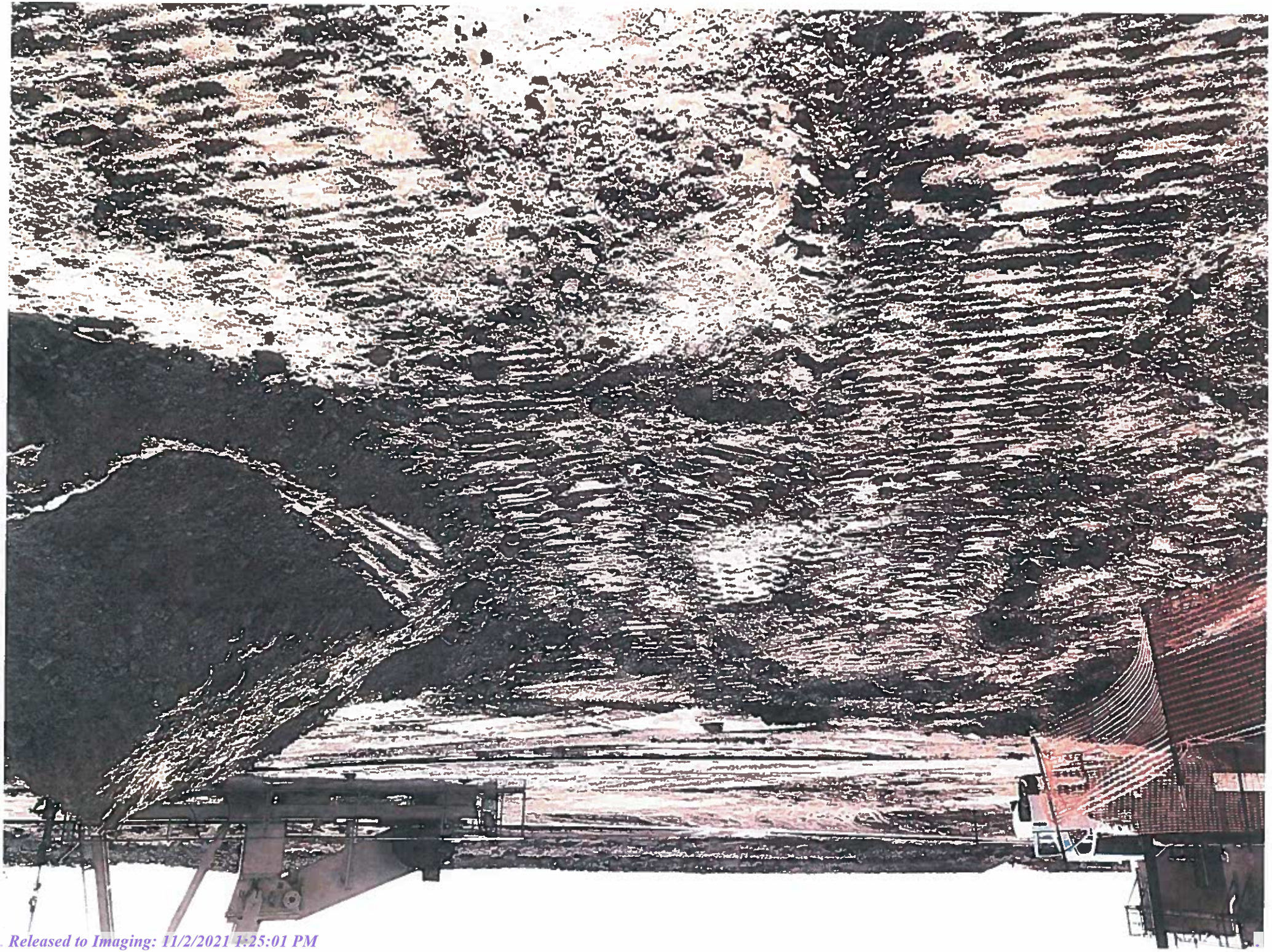



CAT






CAT



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# Analytical Report

## Report Summary

Client: Four Corners Exploration/Dugan Production

Samples Received: 3/28/2019
Job Number: 06094-0177
Work Order: P903075
Project Name/Location: South Bisti Fed 29 #1

Report Reviewed By: Walter Hinchman Date: 4/2/19

Walter Hinchman, Laboratory Director

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc. currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

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envirotech-inc.com
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| | | | |
|---|---|---|---|
| Four Corners Exploration/Dugan Production | Project Name: | South Bisti Fed 29 #1 | |
| 4100 W Piedras St | Project Number: | 06094-0177 | Reported: |
| Farmington NM, 87499 | Project Manager: | Mike Sandoval | 04/02/19 17:25 |

## Analyical Report for Samples

| Client Sample ID | Lab Sample ID | Matrix | Sampled | Received | Container |
|---|---|---|---|---|---|
| South Bisti Fed 29 #1 #1 | P903075-01A | Soil | 03/28/19 | 03/28/19 | Glass Jar, 4 oz. |
| South Bisti Fed 29 #1 #2 | P903075-02A | Soil | 03/28/19 | 03/28/19 | Glass Jar, 4 oz. |
| South Bisti Fed 29 #1 #3 | P903075-03A | Soil | 03/28/19 | 03/28/19 | Glass Jar, 4 oz. |
| South Bisti Fed 29 #1 #4 | P903075-04A | Soil | 03/28/19 | 03/28/19 | Glass Jar, 4 oz. |
| South Bisti Fed 29 #1 #B | P903075-05A | Soil | 03/28/19 | 03/28/19 | Glass Jar, 4 oz. |

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|---|---|---|---|
| Four Corners Exploration/Dugan Production | Project Name: | South Bisti Fed 29 #1 | |
| 4100 W Piedras St | Project Number: | 06094-0177 | Reported: |
| Farmington NM, 87499 | Project Manager: | Mike Sandoval | 04/02/19 17:25 |

## South Bisti Fed 29 #1 #1
### P903075-01 (Solid)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by 8260** | | | | | | | | | |
| Benzene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| Toluene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| Ethylbenzene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| p,m-Xylene | ND | 0.0500 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| o-Xylene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| Total Xylenes | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *104 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *100 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8260B* | |
| *Surrogate: Bromofluorobenzene* | | *97.8 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8260B* | |
| **Nonhalogenated Organics by 8015** | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 20.0 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8015D | |
| Diesel Range Organics (C10-C28) | ND | 25.0 | mg/kg | 1 | 1913043 | 04/01/19 | 04/01/19 | EPA 8015D | |
| Oil Range Organics (C28-C40) | ND | 50.0 | mg/kg | 1 | 1913043 | 04/01/19 | 04/01/19 | EPA 8015D | |
| *Surrogate: n-Nonane* | | *146 %* | | *50-200* | *1913043* | *04/01/19* | *04/01/19* | *EPA 8015D* | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *104 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8015D* | |
| *Surrogate: Toluene-d8* | | *100 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8015D* | |
| *Surrogate: Bromofluorobenzene* | | *97.8 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8015D* | |
| **Anions by 300.0/9056A** | | | | | | | | | |
| Chloride | 48.1 | 20.0 | mg/kg | 1 | 1914002 | 04/01/19 | 04/01/19 | EPA 300.0/9056A | |

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|---|---|---|---|
| Four Corners Exploration/Dugan Production | Project Name: | South Bisti Fed 29 #1 | |
| 4100 W Piedras St | Project Number: | 06094-0177 | Reported: |
| Farmington NM, 87499 | Project Manager: | Mike Sandoval | 04/02/19 17:25 |

## South Bisti Fed 29 #1 #2
## P903075-02 (Solid)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by 8260** | | | | | | | | | |
| Benzene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| Toluene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| Ethylbenzene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| p,m-Xylene | ND | 0.0500 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| o-Xylene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| Total Xylenes | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *95.4 %* | *70-130* | | *1914003* | *04/01/19* | *04/02/19* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *99.2 %* | *70-130* | | *1914003* | *04/01/19* | *04/02/19* | *EPA 8260B* | |
| *Surrogate: Bromofluorobenzene* | | *99.1 %* | *70-130* | | *1914003* | *04/01/19* | *04/02/19* | *EPA 8260B* | |
| **Nonhalogenated Organics by 8015** | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 20.0 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8015D | |
| Diesel Range Organics (C10-C28) | 49.2 | 25.0 | mg/kg | 1 | 1913043 | 04/01/19 | 04/01/19 | EPA 8015D | |
| Oil Range Organics (C28-C40) | ND | 50.0 | mg/kg | 1 | 1913043 | 04/01/19 | 04/01/19 | EPA 8015D | |
| *Surrogate: n-Nonane* | | *109 %* | *50-200* | | *1913043* | *04/01/19* | *04/01/19* | *EPA 8015D* | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *95.4 %* | *70-130* | | *1914003* | *04/01/19* | *04/02/19* | *EPA 8015D* | |
| *Surrogate: Toluene-d8* | | *99.2 %* | *70-130* | | *1914003* | *04/01/19* | *04/02/19* | *EPA 8015D* | |
| *Surrogate: Bromofluorobenzene* | | *99.1 %* | *70-130* | | *1914003* | *04/01/19* | *04/02/19* | *EPA 8015D* | |
| **Anions by 300.0/9056A** | | | | | | | | | |
| Chloride | 214 | 20.0 | mg/kg | 1 | 1914002 | 04/01/19 | 04/01/19 | EPA 300.0/9056A | |



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|---|---|---|---|
| Four Corners Exploration/Dugan Production | Project Name: | South Bisti Fed 29 #1 | |
| 4100 W Piedras St | Project Number: | 06094-0177 | Reported: |
| Farmington NM, 87499 | Project Manager: | Mike Sandoval | 04/02/19 17:25 |

## South Bisti Fed 29 #1 #3
### P903075-03 (Solid)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by 8260** | | | | | | | | | |
| Benzene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| Toluene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| Ethylbenzene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| p,m-Xylene | ND | 0.0500 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| o-Xylene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| Total Xylenes | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *97.6 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *99.6 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8260B* | |
| *Surrogate: Bromofluorobenzene* | | *97.6 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8260B* | |
| **Nonhalogenated Organics by 8015** | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 20.0 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8015D | |
| Diesel Range Organics (C10-C28) | 98.8 | 25.0 | mg/kg | 1 | 1913043 | 04/01/19 | 04/01/19 | EPA 8015D | |
| Oil Range Organics (C28-C40) | ND | 50.0 | mg/kg | 1 | 1913043 | 04/01/19 | 04/01/19 | EPA 8015D | |
| *Surrogate: n-Nonane* | | *106 %* | | *50-200* | *1913043* | *04/01/19* | *04/01/19* | *EPA 8015D* | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *97.6 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8015D* | |
| *Surrogate: Toluene-d8* | | *99.6 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8015D* | |
| *Surrogate: Bromofluorobenzene* | | *97.6 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8015D* | |
| **Anions by 300.0/9056A** | | | | | | | | | |
| Chloride | 318 | 20.0 | mg/kg | 1 | 1914002 | 04/01/19 | 04/01/19 | EPA 300.0/9056A | |

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|---|---|---|---|
| Four Corners Exploration/Dugan Production | Project Name: | South Bisti Fed 29 #1 | |
| 4100 W Piedras St | Project Number: | 06094-0177 | Reported: |
| Farmington NM, 87499 | Project Manager: | Mike Sandoval | 04/02/19 17:25 |

## South Bisti Fed 29 #1 #4
### P903075-04 (Solid)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by 8260** | | | | | | | | | |
| Benzene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| Toluene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| Ethylbenzene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| p,m-Xylene | ND | 0.0500 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| o-Xylene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| Total Xylenes | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *96.4 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *99.8 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8260B* | |
| *Surrogate: Bromofluorobenzene* | | *97.0 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8260B* | |
| **Nonhalogenated Organics by 8015** | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 20.0 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8015D | |
| Diesel Range Organics (C10-C28) | ND | 25.0 | mg/kg | 1 | 1913043 | 04/01/19 | 04/01/19 | EPA 8015D | |
| Oil Range Organics (C28-C40) | ND | 50.0 | mg/kg | 1 | 1913043 | 04/01/19 | 04/01/19 | EPA 8015D | |
| *Surrogate: n-Nonane* | | *103 %* | | *50-200* | *1913043* | *04/01/19* | *04/01/19* | *EPA 8015D* | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *96.4 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8015D* | |
| *Surrogate: Toluene-d8* | | *99.8 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8015D* | |
| *Surrogate: Bromofluorobenzene* | | *97.0 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8015D* | |
| **Anions by 300.0/9056A** | | | | | | | | | |
| Chloride | 377 | 20.0 | mg/kg | 1 | 1914002 | 04/01/19 | 04/01/19 | EPA 300.0/9056A | |

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| | | | |
|---|---|---|---|
| Four Corners Exploration/Dugan Production | Project Name: | South Bisti Fed 29 #1 | |
| 4100 W Piedras St | Project Number: | 06094-0177 | Reported: |
| Farmington NM, 87499 | Project Manager: | Mike Sandoval | 04/02/19 17:25 |

## South Bisti Fed 29 #1 #B
### P903075-05 (Solid)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by 8260** | | | | | | | | | |
| Benzene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| Toluene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| Ethylbenzene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| p,m-Xylene | ND | 0.0500 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| o-Xylene | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| Total Xylenes | ND | 0.0250 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8260B | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *93.9 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *99.9 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8260B* | |
| *Surrogate: Bromofluorobenzene* | | *100 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8260B* | |
| **Nonhalogenated Organics by 8015** | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 20.0 | mg/kg | 1 | 1914003 | 04/01/19 | 04/02/19 | EPA 8015D | |
| Diesel Range Organics (C10-C28) | 99.6 | 25.0 | mg/kg | 1 | 1913043 | 04/01/19 | 04/01/19 | EPA 8015D | |
| Oil Range Organics (C28-C40) | ND | 50.0 | mg/kg | 1 | 1913043 | 04/01/19 | 04/01/19 | EPA 8015D | |
| *Surrogate: n-Nonane* | | *99.9 %* | | *50-200* | *1913043* | *04/01/19* | *04/01/19* | *EPA 8015D* | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *93.9 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8015D* | |
| *Surrogate: Toluene-d8* | | *99.9 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8015D* | |
| *Surrogate: Bromofluorobenzene* | | *100 %* | | *70-130* | *1914003* | *04/01/19* | *04/02/19* | *EPA 8015D* | |
| **Anions by 300.0/9056A** | | | | | | | | | |
| Chloride | 314 | 20.0 | mg/kg | 1 | 1914002 | 04/01/19 | 04/01/19 | EPA 300.0/9056A | |



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| | | | |
|---|---|---|---|
| Four Corners Exploration/Dugan Production | Project Name: | South Bisti Fed 29 #1 | |
| 4100 W Piedras St | Project Number: | 06094-0177 | Reported: |
| Farmington NM, 87499 | Project Manager: | Mike Sandoval | 04/02/19 17:25 |

## Volatile Organic Compounds by 8260 - Quality Control

## Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 1914003 - Purge and Trap EPA 5030A** | | | | | | | | | | |
| **Blank (1914003-BLK1)** | | | | Prepared: 04/01/19 1 Analyzed: 04/02/19 1 | | | | | | |
| Benzene | ND | 0 0250 | mg/kg | | | | | | | |
| Toluene | ND | 0 0250 | " | | | | | | | |
| Ethylbenzene | ND | 0 0250 | " | | | | | | | |
| p,m-Xylene | ND | 0 0500 | " | | | | | | | |
| o-Xylene | ND | 0 0250 | " | | | | | | | |
| Total Xylenes | ND | 0 0250 | " | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0 498* | | " | *0 500* | | *99.6* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0 505* | | " | *0 500* | | *101* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *0 487* | | " | *0 500* | | *97.3* | *70-130* | | | |
| **LCS (1914003-BS1)** | | | | Prepared: 04/01/19 1 Analyzed: 04/02/19 1 | | | | | | |
| Benzene | 2 49 | 0 0250 | mg/kg | 2 50 | | 99 7 | 70-130 | | | |
| Toluene | 2 46 | 0 0250 | " | 2 50 | | 98 2 | 70-130 | | | |
| Ethylbenzene | 2 41 | 0 0250 | " | 2 50 | | 96 4 | 70-130 | | | |
| p,m-Xylene | 4 71 | 0 0500 | " | 5 00 | | 94 1 | 70-130 | | | |
| o-Xylene | 2.34 | 0 0250 | " | 2 50 | | 93.6 | 70-130 | | | |
| Total Xylenes | 7 05 | 0 0250 | " | 7 50 | | 94.0 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0 498* | | " | *0 500* | | *99.6* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0 509* | | " | *0 500* | | *102* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *0 483* | | " | *0 500* | | *96.6* | *70-130* | | | |
| **Matrix Spike (1914003-MS1)** | | Source: P903075-01 | | Prepared: 04/01/19 1 Analyzed: 04/02/19 1 | | | | | | |
| Benzene | 2.54 | 0 0250 | mg/kg | 2 50 | ND | 101 | 48-131 | | | |
| Toluene | 2 48 | 0 0250 | " | 2 50 | ND | 99 1 | 48-130 | | | |
| Ethylbenzene | 2.45 | 0 0250 | " | 2.50 | ND | 98 0 | 45-135 | | | |
| p,m-Xylene | 4 78 | 0 0500 | " | 5 00 | ND | 95 7 | 43-135 | | | |
| o-Xylene | 2 38 | 0 0250 | " | 2 50 | ND | 95 4 | 43-135 | | | |
| Total Xylenes | 7 17 | 0 0250 | " | 7 50 | ND | 95 6 | 43-135 | | | |
| *Surrogate: 1 2-Dichloroethane-d4* | *0 503* | | " | *0 500* | | *101* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0 501* | | " | *0 500* | | *100* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *0 495* | | " | *0 500* | | *98 9* | *70-130* | | | |
| **Matrix Spike Dup (1914003-MSD1)** | | Source: P903075-01 | | Prepared: 04/01/19 1 Analyzed: 04/02/19 1 | | | | | | |
| Benzene | 2.54 | 0 0250 | mg/kg | 2 50 | ND | 101 | 48-131 | 0 0394 | 23 | |
| Toluene | 2 47 | 0 0250 | " | 2 50 | ND | 98 8 | 48-130 | 0 283 | 24 | |
| Ethylbenzene | 2 44 | 0 0250 | " | 2 50 | ND | 97 7 | 45-135 | 0 327 | 27 | |
| p,m-Xylene | 4 77 | 0 0500 | " | 5 00 | ND | 95 4 | 43-135 | 0 314 | 27 | |
| o-Xylene | 2 38 | 0 0250 | " | 2 50 | ND | 95 3 | 43-135 | 0 0629 | 27 | |
| Total Xylenes | 7 15 | 0 0250 | " | 7 50 | ND | 95 3 | 43-135 | 0 230 | 27 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0 511* | | " | *0 500* | | *102* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0 502* | | " | *0 500* | | *100* | *70-130* | | | |

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|---|---|---|---|
| Four Corners Exploration/Dugan Production | Project Name: | South Bisti Fed 29 #1 | |
| 4100 W Piedras St | Project Number: | 06094-0177 | Reported: |
| Farmington NM, 87499 | Project Manager: | Mike Sandoval | 04/02/19 17:25 |

## Volatile Organic Compounds by 8260 - Quality Control

## Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 1914003 - Purge and Trap EPA 5030A** | | | | | | | | | | |
| **Matrix Spike Dup (1914003-MSD1)** | **Source: P903075-01** | | | Prepared: 04/01/19 1 Analyzed: 04/02/19 1 | | | | | | |
| *Surrogate: Bromofluorobenzene* | *0.500* | | *mg/kg* | *0.500* | | *99.9* | *70-130* | | | |

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|---|---|---|---|
| Four Corners Exploration/Dugan Production | Project Name: | South Bisti Fed 29 #1 | |
| 4100 W Piedras St | Project Number: | 06094-0177 | Reported: |
| Farmington NM, 87499 | Project Manager: | Mike Sandoval | 04/02/19 17:25 |

## Nonhalogenated Organics by 8015 - Quality Control

## Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 1913043 - DRO Extraction EPA 3570** | | | | | | | | | | |
| **Blank (1913043-BLK1)** | | | | Prepared & Analyzed: 04/01/19 1 | | | | | | |
| Diesel Range Organics (C10-C28) | ND | 25.0 | mg/kg | | | | | | | |
| Oil Range Organics (C28-C40) | ND | 50.0 | " | | | | | | | |
| *Surrogate: n-Nonane* | *58.7* | | " | *50.0* | | *117* | *50-200* | | | |
| **LCS (1913043-BS1)** | | | | Prepared & Analyzed: 04/01/19 1 | | | | | | |
| Diesel Range Organics (C10-C28) | 468 | 25.0 | mg/kg | 500 | | 93.6 | 38-132 | | | |
| *Surrogate: n-Nonane* | *48.4* | | " | *50.0* | | *96.9* | *50-200* | | | |
| **Matrix Spike (1913043-MS1)** | Source: P903075-05 | | | Prepared & Analyzed: 04/01/19 1 | | | | | | |
| Diesel Range Organics (C10-C28) | 553 | 25.0 | mg/kg | 500 | 99.6 | 90.7 | 38-132 | | | |
| *Surrogate: n-Nonane* | *45.3* | | " | *50.0* | | *90.6* | *50-200* | | | |
| **Matrix Spike Dup (1913043-MSD1)** | Source: P903075-05 | | | Prepared & Analyzed: 04/01/19 1 | | | | | | |
| Diesel Range Organics (C10-C28) | 569 | 25.0 | mg/kg | 500 | 99.6 | 93.8 | 38-132 | 2.83 | 20 | |
| *Surrogate: n-Nonane* | *48.1* | | " | *50.0* | | *96.2* | *50-200* | | | |



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|---|---|---|---|
| Four Corners Exploration/Dugan Production | Project Name: | South Bisti Fed 29 #1 | |
| 4100 W Piedras St | Project Number: | 06094-0177 | Reported: |
| Farmington NM, 87499 | Project Manager: | Mike Sandoval | 04/02/19 17:25 |

## Nonhalogenated Organics by 8015 - Quality Control

## Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 1914003 - Purge and Trap EPA 5030A** | | | | | | | | | | |
| **Blank (1914003-BLK1)** | | | | Prepared: 04/01/19 1 Analyzed: 04/02/19 1 | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 20.0 | mg/kg | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.498* | | " | *0.500* | | *99.6* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.505* | | " | *0.500* | | *101* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *0.487* | | " | *0.500* | | *97.3* | *70-130* | | | |
| **LCS (1914003-BS2)** | | | | Prepared: 04/01/19 1 Analyzed: 04/02/19 1 | | | | | | |
| Gasoline Range Organics (C6-C10) | 48.3 | 20.0 | mg/kg | 50.0 | | 96.7 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.499* | | " | *0.500* | | *99.7* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.502* | | " | *0.500* | | *100* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *0.483* | | " | *0.500* | | *96.6* | *70-130* | | | |
| **Matrix Spike (1914003-MS2)** | Source: P903075-01 | | | Prepared: 04/01/19 1 Analyzed: 04/02/19 1 | | | | | | |
| Gasoline Range Organics (C6-C10) | 46.2 | 20.0 | mg/kg | 50.0 | ND | 92.4 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.507* | | " | *0.500* | | *101* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.497* | | " | *0.500* | | *99.4* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *0.496* | | " | *0.500* | | *99.1* | *70-130* | | | |
| **Matrix Spike Dup (1914003-MSD2)** | Source: P903075-01 | | | Prepared: 04/01/19 1 Analyzed: 04/02/19 1 | | | | | | |
| Gasoline Range Organics (C6-C10) | 50.7 | 20.0 | mg/kg | 50.0 | ND | 101 | 70-130 | 9.25 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.495* | | " | *0.500* | | *98.9* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.505* | | " | *0.500* | | *101* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *0.493* | | " | *0.500* | | *98.5* | *70-130* | | | |

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|---|---|---|---|
| Four Corners Exploration/Dugan Production | Project Name | South Bisti Fed 29 #1 | |
| 4100 W Piedras St | Project Number | 06094-0177 | Reported: |
| Farmington NM, 87499 | Project Manager | Mike Sandoval | 04/02/19 17:25 |

## Anions by 300.0/9056A - Quality Control

## Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 1914002 - Anion Extraction EPA 300.0/9056A** | | | | | | | | | | |
| **Blank (1914002-BLK1)** | | | | Prepared: 04/01/19 0 Analyzed: 04/01/19 1 | | | | | | |
| Chloride | ND | 20 0 | mg/kg | | | | | | | |
| **LCS (1914002-BS1)** | | | | Prepared: 04/01/19 0 Analyzed: 04/01/19 1 | | | | | | |
| Chloride | 256 | 20 0 | mg/kg | 250 | | 102 | 90-110 | | | |
| **Matrix Spike (1914002-MS1)** | Source: P903075-01 | | | Prepared: 04/01/19 0 Analyzed: 04/01/19 1 | | | | | | |
| Chloride | 295 | 20 0 | mg/kg | 250 | 48 1 | 98 6 | 80-120 | | | |
| **Matrix Spike Dup (1914002-MSD1)** | Source: P903075-01 | | | Prepared: 04/01/19 0 Analyzed: 04/01/19 1 | | | | | | |
| Chloride | 295 | 20 0 | mg/kg | 250 | 48 1 | 98 7 | 80-120 | 0 0543 | 20 | |



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|---|---|---|---|
| Four Corners Exploration/Dugan Production | Project Name: | South Bisti Fed 29 #1 | |
| 4100 W Piedras St | Project Number: | 06094-0177 | Reported: |
| Farmington NM, 87499 | Project Manager: | Mike Sandoval | 04/02/19 17:25 |

## Notes and Definitions

| | |
|---|---|
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| RPD | Relative Percent Difference |
| ** | Methods marked with ** are non-accredited methods. |



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Project Information

Chain of Custody

(2D)

Page 1 of 1

| Client: Four Corners Exploration/Dugan Production | Report Attention |
|---|---|
| Project: South Bisti Fed 29#1 | Report due by: |
| Project Manager: Michael Sandoval | Attention: |
| Address: | Address: |
| City, State, Zip | City, State, Zip |
| Phone: 330-0929 | Phone: |
| Email: Mike.Sandoval@duganproduction.com | Email: |

| Lab Use Only | | TAT | | EPA Program | | |
|---|---|---|---|---|---|---|
| Lab WO# | Job Number | 1D | 3D | RCRA | CWA | SDWA |
| P903075 | 06094-0177 | | | | | |

| State | | | |
|---|---|---|---|
| NM | CO | UT | AZ |
| X | | | |

| Time Sampled | Date Sampled | Matrix | No Containers | Sample ID | Lab Number | DRO/ORO by 8015 | GRO/DRO by 8015 | BTEX by 8021 | VOC by 8260 | Metals 6010 | Chloride 300.0 | TPH 418.1 | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10:30 | 3-28-19 | S | 1 | South Bisti Fed 29#1 #1 | 1 | | | | | | | | |
| 10:40 | " | S | 1 | " #2 | 2 | | | | | | | | |
| 10:50 | " | S | 1 | " #3 | 3 | | | | | | | | |
| 11:00 | " | S | 1 | " #4 | 4 | | | | | | | | |
| 11:10 | " | S | 1 | " #5 | 5 | | | | | | | | |

**Additional Instructions:**

Bill Dugan Production Dave 3/29/19

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Michael Sandoval

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6°C on subsequent days.

| Relinquished by: (Signature) | Date | Time | Received by: (Signature) | Date | Time |
|---|---|---|---|---|---|
| Michael Sandoval | 3-29-19 | 4:40 | Raina Lopez | 3-29-19 | 4:44pm |
| Relinquished by: (Signature) | Date 3-28-19 RL | Time | Received by: (Signature) | Date 3-28-19 RL | Time |

Lab Use Only
Received on ice: (Y) / N
T1 T2 T3
AVG Temp °C 4

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above [illegible] laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



envirotech Analytical Laboratory
5796 US Highway 64 Farmington, NM 87401
Three Springs • 65 Mercado Street, Suite 115 Durango, CO 81301
Ph (505) 632-0615 Fx (505) 632-1865
Ph (970) 259-0615 Fx (970) 382-1679
envirotech-inc.com
laboratory@envirotech-inc.com

**District I**
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
**District II**
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
**District III**
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
**District IV**
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

# State of New Mexico
# Energy, Minerals and Natural Resources
# Oil Conservation Division
# 1220 S. St Francis Dr.
# Santa Fe, NM 87505



## CONDITIONS

| Operator: | OGRID: |
|---|---|
| DUGAN PRODUCTION CORP<br>PO Box 420<br>Farmington, NM 87499 | 6515 |
| | Action Number: 9990 |
| | Action Type: [C-144] PIT Generic Plan (C-144) |

**CONDITIONS**

| Created By | Condition | Condition Date |
|---|---|---|
| vvenegas | None | 11/2/2021 |